**OOPS Practical Questions**

**Basic Class Creation:**

Create a Book class with properties like Title, Author, and Price. Write methods to display the book details and calculate a discount on the price.

Instantiate the class and use the methods to show the discounted price for a few sample books.

**Student Management:**

Create a Student class with properties Name, RollNo, and Marks.

Write a method to calculate the grade based on Marks (e.g., A, B, C) and another method to display the student's details along with the grade.

**Simple Bank Account:**

Define a BankAccount class with properties AccountNumber, AccountHolderName, and Balance.

Write methods Deposit and Withdraw, ensuring Withdraw only allows valid withdrawals (i.e., not exceeding the balance).

Create an instance and test deposit and withdrawal methods.

**Employee Salary Calculator:**

Create an Employee class with properties Name, Position, and MonthlySalary.

Write a method to calculate the yearly salary and display the employee details.

Add a constructor to initialize the properties when creating an instance.

**Car Information System:**

Design a Car class with properties Make, Model, Year, and Price.

Write a method to display the car details and another to calculate a depreciation value based on the car’s age.

Test the class by creating objects with different Year values to see depreciation.

**Library Membership:**

Create a Member class with properties like MemberID, Name, and BooksBorrowed.

Add methods to BorrowBook (which increases BooksBorrowed by 1) and ReturnBook (which decreases BooksBorrowed by 1).

Instantiate the class and simulate borrowing and returning books.

**Rectangle Calculator:**

Define a Rectangle class with properties Length and Width.

Write methods to calculate and return the area and perimeter of the rectangle.

Prompt the user to enter values for Length and Width and display the calculated area and perimeter.

**Simple Product Catalog:**

Create a Product class with properties ProductID, ProductName, and Price.

Add a method to apply a discount to the Price, and display the new price.

Use this method to show discounted prices for a list of products.

**School Marks System:**

Define a Subject class with properties SubjectName and Marks.

Add a method to display whether the student passed (e.g., pass marks are 35).

Create instances for three subjects and display if the student passed in each.

**Basic Calculator:**

Create a Calculator class with methods Add, Subtract, Multiply, and Divide, each taking two numbers as parameters.

Call each method with sample inputs and display the results.